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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,736	09/11/2003	Chuan De Lai		8296

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EXAMINER

KIM, RICHARD H

ART UNIT PAPER NUMBER

2871

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No. 10/661,736	Applicant(s) LAI, CHUAN DE	
	Examiner Richard H. Kim	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/22/05
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 13-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 13-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 10 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamashita (US 6,309,079 B1).

Yamashita discloses a backlight system comprising a light guide plate defining a plurality of side faces, opposite bottom and exit faces (Fig. 10, ref. 101), a plurality of incident faces (101), the side face commonly defining a periphery of the light guide plate (101); the incident faces being at each corners of the light guide plate (101) and a plurality of point light sources essentially uniformly dispersed along the periphery and located at the corners, the point light sources commonly directed toward a center region of the light guide plate (Fig. 13, ref. 102), wherein most portions of each of the light sources is located within an area of the corresponding corner which is defined by two neighboring side faces (101, 102).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita (US 6,309,079 B1) in view of Akahane (US 5,931,555).

Referring to claims 1, 4 and 7, Yamashita discloses a device comprising a light guide plate including a plurality of incident surfaces disposed at the corners thereof (Fig. 13, ref. 101); a light exit surface and a bottom surface opposite to the light exit surface (Fig. 12); and a plurality of point light sources for emitting light beams disposed adjacent and opposite to the incident surface (Fig. 13, ref. 102). However, the reference does not disclose that the bottom surface has a plurality of rectangular dots thereon, and a covering rate of the scattering pattern varies such that a light distribution density of light emitted from the light guide plate is uniform.

Akahane discloses a device wherein the bottom surface comprises a light scattering pattern having a plurality of rectangular dots thereon, and a covering rate of the scattering pattern varies such that a light distribution density of light emitted from the light guide plate is uniform (Fig. 9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a light scattering pattern having a plurality of dots thereon, and a covering rate of the scattering pattern varies such that a light distribution density of light emitted from the light guide plate is uniform since one would be motivated to improve the uniformity of luminance (abstract).

Referring to claim 2, Yamashita and Akahane disclose the device previously recited, but fails to disclose that the point light sources are light emitting diodes.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made for the point light sources to be light emitting diodes since light emitting diodes are well known in the art to be a strong and reliable light source.

Referring to claims 3 and 8, Yamashita further discloses four incident surfaces disposed at opposite corners thereof (Fig. 3, ref. 101).

Referring to claims 5 and 9, Yamashita further discloses that the bottom surface further comprises a reflective film (Fig. 10, ref. 103).

Referring to claim 6, Yamashita and Akahane disclose the device previously recited, but fails to disclose that the reflective ratio is greater than 98% for wavelengths in the range of the visible spectrum.

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the reflective ratio to be greater than 98% for wavelengths in the range of the visible spectrum since an skilled artisan in the art would have known that improving the reflectivity of the reflective film would improve the brightness of the display. Therefore, limiting the reflective film to have a reflectivity of 98% or greater would have been obvious in order to improve display brightness.

3. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita.

Yamashita discloses the device previously recited, but fails to disclose that each of the point light sources defines an effective angle range between two lines, and one of the two lines is aligned with one corresponding face, wherein each of the point light

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sources has two neighboring light sources, and at least one of the two neighboring point light sources defines another effective angle range between another two lines wherein one of the another two lines is aligned with the same one corresponding side face so that an area beside the one corresponding side face belongs to a higher light intensity distribution area.

It would have been obvious to one having ordinary skill in the art at the time the invention was made for each of the point light sources to define an effective angle range between two lines, and one of the two lines is aligned with one corresponding face, wherein each of the point light sources has two neighboring light sources, and at least one of the two neighboring point light sources defines another effective angle range between another two lines wherein one of the another two lines is aligned with the same one corresponding side face so that an area beside the one corresponding side face belongs to a higher light intensity distribution area since optimally arranging the point light sources in order to achieve improved light uniformity and brightness requires only routine skill in the art.

4. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita in view of Toyoda (US 6,582,095 B2).

Yamashita discloses the device previously recited, but fails to disclose the device wherein each of the incident faces is derived from a cutout at the corresponding corner.

Toyoda discloses an incident face derived from a cut out at the corresponding corner (Fig. 1, ref. 4).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ incident faces derived from a cutout at the corresponding corner since one would be motivated to increase the surface area in which the light source is incident, thereby achieving greater coupling efficiency.

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita in view of Akahane.

Yamashita discloses the device previously recited, but fails to disclose that the bottom surface comprises a plurality of dots thereon, and a covering rate of the scattering pattern varies such that a light distribution density of light emitted from the exit face of the light guide plate is uniform.

Akahane discloses a device wherein the bottom surface comprises a plurality of dots thereon, and a covering rate of the scattering pattern varies such that a light distribution density of light emitted from the exit face of the light guide plate is uniform (Fig. 9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a bottom surface comprising a plurality of dots thereon, and a covering rate of the scattering pattern varies such that a light distribution density of light emitted from the exit face of the light guide plate is uniform since one would be motivated to improve the uniformity of luminance (abstract).

Response to Arguments

6. Applicant's arguments filed 3/22/05 have been fully considered but they are not persuasive.

7. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., parts of the light sources cover the display area) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

8. In response to Applicant's argument that Yamashita does not disclose that the point light sources are arranged along the periphery defined by the side faces and located at the corners with the incident faces, Examiner submits that Yamashita discloses light sources (102) defined by the side faces (side faces of light guide 101) and located at the corners with the incident faces (corners of 101). The incident surfaces, as Examiner interprets, are surfaces to which the light is incident. Therefore, in order for light to enter the light guide, incident surfaces are disposed therein, whether it be the corners themselves or the surfaces that form the corners.

9. In response to Applicant's argument that Yamashita does not disclose that the motivating purpose are different from the invention, Examiner submits that the feature upon which applicant relies (i.e., so as to ensure that the backlight system emits light with a high degree of uniformity) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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10. In response to Applicant's argument that Yamashita discloses that the light sources are positioned at the vicinity of the corners of the display surface, not at the corners of the display surface, Examiner submits that the light sources (102) are clearly disposed at the corners of the light guide plate (101).

11. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, even though the references represent two distinct inventions, fully functional in itself (as are the case in most 103 rejections), Examiner submits that such a combination can still be made since motivation to do so is provided in the Akahane reference.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

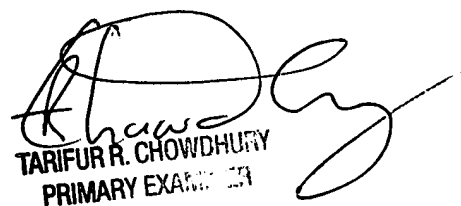
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard H. Kim whose telephone number is (571)272-2294. The examiner can normally be reached on 9:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard H Kim
Examiner
Art Unit 2871

RHK


TARIFUR R. CHOWDHURY
PRIMARY EXAMINER